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CORRESPONDENCE COURSES

OFFERED BY THE

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(The numbers in parentheses refer to the number of the course)

CORRESPONDENCE COURSES

During the past few years the officials of agricultural colleges have been directing their attention to methods of carrying information to persons while they are actively engaged in earning a livelihood; some as farmers and others who are at present engaged in other lines of work, but who hope some time to become farmers and desire to obtain knowledge of farming operations while they are accumulating capital by means already mastered but less desired. Practically all lines of agricultural extension teaching have proved exceedingly popular. The number of persons reached by these various extension activities seems very large when compared with the number of students at the agricultural colleges and schools, but exceedingly small when compared with the whole number engaged in all classes or kinds of farming. For instance, there are in Ohio more than 420,000 men and boys over 10 years of age who are actively engaged in agricultural persuits and probably not more than 10% of these are reached by all of the various agricultural teaching activities.

In order to reach a larger proportion of the rural population several of the agricultural colleges in the United States have established correspondence courses in agricultural subjects. Thru the correspondence courses offered by the College of Agriculture of the Ohio State University each and every person in Ohio who can intelligently read English can obtain practical instruction on those lines of farming covered by the courses.

These correspondence courses are prepared by the regular faculty members of the Agricultural College, and, of course, have special application to Ohio conditions.

Each course, deals with one particular type of farm work in as brief a manner as is consistent with clearness. The purpose of each course is to give the student in brief, concise form such information as may be necessary to enable him intelligently to engage in that particular branch of farming. Each subject will be treated technically, but in a clear, plain, simple, and direct manner that is easy to understand.

In other words, the correspondence courses are designed to meet the needs of that large class of people who are interested in agricultural work of one kind or another, but who cannot secure such information in any other manner. These courses may reach every city, town, village and R. F. D. mail box in the state as no other method of teaching yet devised can or has done. They supplement the agricultural extension schools, the farmers' institutes, the Farmers' Week at the college, and the individual lecture. In fact they constitute an agricultural extension school or a "boiled down" short course for each student.

Each course consists of four or more lessons and each lesson consists of approximately twenty typewritten pages of standard size note paper, that is 8½ x 11 inches, and a list of questions. The answer to the questions will bring out the principal points in each lesson.

These courses are free to residents of Ohio. All that the College requires of students is that they take up a course with earnestness and pursue it with diligence. If fact, unless a student intends to continue a course until it is completed he will obtain but little benefit from it, because the method of instruction will prevent him from receiving more than one lesson in any one course.

As soon as the Extension Service receives the application for enrollment from any resident of Ohio giving his or her name, address, course desired, age, and occupation, a permanent record card for that student will be filed in the Extension Service office and the first lesson in the course requested will be mailed to him. As soon as answers to the examination questions accompanying the first lesson are received at the Extension Service office, lesson number two will be mailed to the student. The student's answer's will then be examined and corrected and returned to him or her. This plan will be continued until the course is finished. Application for enrollment should be made on the post card that is enclosed with this bulletin.

It is not expected that these correspondence courses will take the place of college work and college credit will not be given to students completing them. The prime purpose of the courses is to aid people who do not feel that they can take the time to go to college. However, it is believed that after taking these courses, a young man or woman should be able to pass a credible college entrance examination in the subject, Agriculture. The courses will be of considerable assistance to teachers who have not had the advantage of a college course in agricutlure.

Although the correspondence courses have been prepared primarily for individual study, they may be studied by classes where several in one community can arrange to meet periodically for studying the course. In such cases the class should organize by selecting a chairman and secretary and decide on regular times for meeting. The lessons should, however, be studied by each individual before the meeting of the class. Then the meeting can be devoted almost wholly to a discussion and review of the lesson. The answers to the questions should be written by each student, as a great deal may be learned and definitely impressed on the memory by simply writing one's thoughts. It is believed that classes in correspondence study can easily be organized by granges, farm clubs, young people's clubs, farmers' institutes, Y. M. C. A., and other organizations.

Where several students or prospective students organize a class, a representative from the Extension Service of the College of Agriculture will, in so far as this is possible, meet with the class either at its organization meeting or later and assist it in its work.

The courses briefly described in the following pages will be ready for students about September first and other courses will be added from time to time as the demand justifies them.

SOIL FERTILITY

Course No. 1 **11 Lessons**

Prepared by M. A. Bachtell, Assistant Professor of Agricultural Chemistry.

Daniel Webster said, "When tillage begins, other arts follow. The farmers, therefore, are founders of human civilization." It may further be said that the most basic principle of a farmer's success is his treatment of the soil.

The author of this course in soil fertility has endeavored to present those essential principles of soil treatment that may be applied in actual farm work. The causes of the success or the failure of certain farm practices are pointed out. Special attention is given to practical farm methods of maintaining and of increasing the fertility of the soil. Among the subjects discussed are sources of plant food; humus; soil moisture; the value, losses, care, and application of farm manures; the composition, buying, and use of mixed commercial fertilizer; lime; and planning for fertility maintenance.

ORCHARD FRUITS

Course No. 2 **13 Lessons**

Prepared by Wendell Paddock, Professor of Horticulture and R. B. Cruickshank, Assistant Professor of Horticulture.

Ohio ranks high in her total value of orchard fruits and also in the diversity of these fruits. The home orchards in almost all parts of the state may contain apples, pears, peaches, cherries, plums, and quinces. This course deals specifically with the production of apples, but peaches, pears, plums, cherries, and quinces are given special consideration as supplementing that for apples. A list of the prinicpal topics of the course includes the following: fruit belts of Ohio; factors affecting orcharding; varieties of apples, pears, peaches, cherries, plums, and quinces; nursery stock, including a description of the methods of propagation, grades, northern and southern grown stock, and suggestions for buying; selections of orchard site; preparation of land; systems of planting; use of fillers; care of young orchards; study of buds, followed by pruning and thinning; spraying; storing and marketing; injuries caused by cold; and insects and diseases.

VEGETABLE GARDENING

Course No. 3 **17 Lessons**

Prepared by L. M. Montgomery, Professor of Horticulture.

The course in Vegetable Gardening deals with the general principles of vegetable growing from the commercial as well as from the amateur standpoint. The work includes such features as the geography of gardening, location of garden enterprises, soils, manures, cover crops and fertilizers, garden plans, seeds and seedage, culture of the various crops, garden tools, irrigation, control of insects, and diseases and marketing.

The purpose is to give the student a broad view of the subject as well as to acquaint him with the best cultural practices in growing the more important vegetable crops.

FARM CROPS COURSES

Several separate courses will cover the subject of farm crops. It is the purpose in offering these courses to give the student information that he desires and these short courses will, to a considerable extent, enable one to secure information concerning the most approved cultural methods pertaining to one particular crop without having to take the time to study one long general course on farm crops. Farm crops courses are treated in three general sets, namely, grain crop courses, forage crop courses, and miscellaneous crop courses.

CORN CULTURE

Course No. 4 **8 Lessons**

Prepared by George Livingston, formerly Assistant Professor of Agronomy.

This course includes a brief history of the corn plant, a discussion of its importance in Ohio, a description of the important parts of the corn plant, the uses of corn, and a rather detailed discussion of the culture, harvesting, storing, and marketing of the corn crop. Methods of improving the corn crop, instructions for judging corn, and a description and treatment of diseases and insect pests are treated in a clear, definite manner.

ALFALFA CULTURE

Course No. 5 **4 Lessons**

Prepared by F. W. Stemple, Assistant Professor of Farm Crops.

Altho alfalfa has been grown in a small way in Ohio for many years, its successful culture has by no means become general. This course acquaints the student with the habits of alfalfa, with its importance as a forage crop, and with the most authorative information on the preparation of the soil, the seeding, culture, and harvesting of this important legume crop. The possibilities of alfalfa growing in Ohio are very promising and this course gives the student the practical instruction for growing the crop. Among the important topics are history, varieties, distribution and importance, adaptation to climate and soil, inoculation, uses, cultural methods, marketing, and breeding.

CLOVER CULTURE

Course No. 6 **4 Lessons**

Prepared by F. W. Stemple, Assistant Professor of Farm Crops.

This course aims to acquaint the student with the value of clovers in pastures, rotations, and all phases of general farming. The course includes a short history of the plant, the discussion of the various varieties, cultural methods, uses, and methods of improvement. A great many farms in Ohio have ceased to produce this valuable crop. The application of the principles taught in this course will materially assist in giving clover its proper place in farm practices in Ohio.

GRASSES

Course No. 7 4 Lessons

Prepared by F. W. Stemple, Assistant Professor of Farm Crops.

Although the majority of the hay produced in the state is probably made of grasses, they have received comparatively little attention in the rural press and in the class rooms of our agricultural colleges. At least they have not received the attention that has been given to legumes. This course has been designed to place in the student's hand information that will enable him to make more use of this important class of plants. The fact that grasses are so common has resulted in their culture being much neglected. It is hoped that, by the application of the cultural methods given in this course, grasses will be greater appreviated and will fill a more useful place as farm crops.

POTATO GROWING

Course No. 8 4 Lessons

Prepared by Max F. Abell, Assistant in Farm Crops.

The growing of potatoes in Ohio is a more or less localized industry and has not been considered very important. The potato crop, however, is the sixth largest crop in Ohio, the demand for good potatoes is steadily increasing, and they are a profitable money crop in many sections. For these reasons a thorough knowledge of the principles underlying the best methods of successful culture and handling of this crop is important. The aim and purpose of this course is to present such information concerning the history and botanical characteristics of the potato to make the study interesting and to give such facts concerning the soil and climatic requirements of potatoes, the preparation of the soil, methods of planting, cultivating, spraying, harvesting, and marketing, as will make the growing of potatoes a profitable line of farming.

TOBACCO GROWING

Course No. 9 4 Lessons

Prepared by A. E. Waller, Assistant in Farm Crops.

Every year some 60,000 acres in Ohio are planted in tobacco. An average yield is 900 pounds per acre and average farm price is about 8 cents per pound. This makes the farm value of an acre of tobacco approximately $72.00. A 75-bushel crop of corn at 70 cents per bushel gives a farm value of only $52.50.

The greater portion of Ohio tobacco is the cigar-filler type and is grown in the Miami valley. A small quantity of Burley is grown in the southern counties and a distinct type known as Eastern Ohio Export is grown in southeastern counties.

It is a generally recognized fact that tobacco culture depends more on distinctive regional characteristics than most other crops. This course points out the importance of tobacco as a farm crop and describes the different types of tobacco and the methods of culture that pertain to each type.

STUDY OF TREES

Course No. 10 **8 Lessons**

Prepared by W. R. Lazenby, Professor of Forestry.

Forests, at one time, covered practically all of Ohio. These forests were made up of individual trees that were native of the state. It is the aim of this course to present such information to the student as will enable him to become acquainted with the most important species of trees, their habits and methods of growth and to give the trees such care as will serve their purpose longest and best. The course treats trees in general from three points of view, namely, what trees are, what trees do, and how trees grow. The uses and care of trees for shelter, shade, ornamentation, and for economical purposes are given in a clear and simple way.

SELECTION AND PREPARATION OF FOOD

Course No. 11 **10 Lessons**

Prepared in the Department of Home Economics.

This course is not designed as an extension of the ordinary course in cooking, but is planned with the idea of grouping food materials in their natural classes, and of developing the principles underlying their selection and preparation. The average housekeeper already possesses a large body of knowledge and experience in relation to the handling of food, and these lessons are planned with the idea of assisting such women to base their selection and utilization of food material on more scientific and economic lines.

HOME SANITATION.

Course No. 12 6 Lessons

Prepared in the Department of Home Economics.

This course is designed especially to fit the needs of the country and village homes where the burden of sanitation, such as water supply, disposal of garbage, etc., is thrown on the individual family, instead of being cared for by public agencies. The responsibility of the housekeeper for the maintenance of the health of the family and practical methods of controlling the factors that influence this, are included. The problems of safe water, disposal of waste, ventilation, care of food is discussed from the housekeeper's standpoint.

POULTRY FARMING

Course No. 13 12 Lessons

Prepared by F. S. Jacoby, Assistant Professor of Poultry Husbandry.

The poultry industry of Ohio is a surprisingly large one, due, perhaps, to the fact that almost every farm and many town and city lots have their flock of chickens. It is stated by the United States Census for 1910 that the value of the eggs produced in Ohio is greater than that of any other state in the Union. Each year a large number of people are endeavoring to raise chickens to supply their table with fresh eggs and chicken. Successful poultry raising consists of more than merely keeping a few chickens, throwing them a little feed, and if opportunity affords, gathering the eggs.

This course gives a brief, but clear and interesting, history of the important classes and breeds of chickens and practical instruction for the economic production of poultry and eggs. In other words, the course gives such information as will assist the poultryman in choosing a desirable breed and teaches him how to raise and manage the flock most profitably.

SHEEP FARMING

Course No. 14 8 Lessons

Prepared by T. C. Stone, Instructor in Animal Husbandry.

The importance of raising a few sheep on almost every farm can scarcely be over-estimated. The purpose of this course is to point out this importance and to give the student brief, yet clear and distinct directions for caring for a flock of sheep. The following headings suggest the scope of this course; brief history of sheep, importance of sheep in Ohio, number of sheep for a given area, types of sheep, breeds of sheep, sheep barns and equipment, size of flock for a beginner, breed to select, selecting a ram, selecting breeding ewes, mating, improvement of a flock, care of flock, wool production, shearing, buying feeders, feeding sheep for market, and marketing of sheep.

DAIRY FARMING

Course No. 15 **10 Lessons**

Prepared by O. Erf, Professor of Dairying.

The importance of dairying in Ohio and its relation to general agriculture is constantly increasing. The aim of this course is to prepare students better to meet the conditions that confront the dairy farmer. That the course deals with the most practical side of dairying is shown by the following topic headings: Relation of dairying to general farming, selection of a dairy farm, dairy stables, milk houses, ice houses, starting a dairy herd, grades, pure breds, selection of a breed, managing the dairy herd, breeding of dairy cattle, feeding of dairy cattle, advanced registry, registry of merit, handling of milk, and the production of cream.

BEE KEEPING.

Course No. 16 **6 Lessons**

Prepared by James S. Hine, Professor of Economic Entomology.

Bees are like sheep in that a few can profitably be kept on every farm. However, it is not necessary to have a farm to keep bees. They may be kept in the backyard of a village or city lot or on the roof or in the attic of a building. The aim of this course is to give the student such instruction regarding the structure, habits, and life history of bees that he may handle them intelligently and with profit. The student is urged so far as he can, to study bees rather than to study about them. The course is a very practical one offering suggestions for the amateur who wants to know the what, when, and how of practical bee keeping.

FARM WATER SUPPLY AND SANITATION

Course No. 17 **6 Lessons**

Prepared by H. C. Ramsower, Professor of Agricultural Engineering.

It is very generally claimed that the lack of modern home conveniences is one of the greatest causes of well-to-do country folks leaving the farm. It is unfortunate for a large number of families, who leave the open country for town or city life, that they do not realize that nearly all of the conveniences found in most city homes can be installed in the country home for less than a building lot costs in most towns and cities worthy of the name. The conveniences that are referred to are water supply, plumbing, sewage disposal, heating, and lighting. Aside from the matter of convenience, the water supply and sewage disposal of a country home should receive the most careful consideration from the viewpoint of health and sanitation.

This course points out the possible sources of a country water supply and the method of making use of them, describes the principles involved in the different systems commonly used in supplying country homes with water, tells how to construct different kinds of wells, gives the cost of same, explains the construction and operation of the common types of pumps, shows under what conditions the hydraulic ram may be installed, and gives a few suggestive plans that may be modified to suit most local conditions. Students of this course will receive special assistance in planning a water system for any special set of local conditions.

CONCRETE WORK ON THE FARM

Course No. 18 **5 Lessons**

Prepared by F. W. Ives, Assistant Professor in Agricultural Engineering.

The use of concrete for the construction of permanent farm improvements is rapidly gaining favor among progressive farmers. At present there is an insistent demand for some kind of satisfactory and lasting construction for farm buildings and other farm structures.

This course has been prepared for the purpose of assisting persons desiring to use concrete as a material for permanent farm improvements. Poor concrete is useless and good concrete cannot be made of poor materials. Therefore, materials receive first consideration in a course on concrete work. The course will not make an A1 mechanic of a bungling workman, but it does give, in as brief a space as is consistent with clearness, information that will enable a careful workman to construct concrete sidewalks, floors, tanks, fence posts, walls, and buildings. Sufficient data are given to enable a farmer to estimate the probable cost of a proposed concrete job. Furthermore, if directions are followed, these improvements will be permanent and afford a great deal of pleasure to the builder and owner.

FARM POWER

Course No. 19 **6 Lessons**

Prepared by H. C. Ramsower, Professor of Agricultural Engineering, and F. W. Ives, Assistant Professor of Agricultural Engineering.

The question of how to replace man labor with power appliances of various kinds is one in which every farmer is interested. Many farmers would be glad to install an engine, a water wheel, an electric generator, or an electric motor if they knew just how to proceed with the work, how to get the most out of their investment, and how much the various appliances might cost.

This course takes up in some detail the construction and operation of the gasoline engine, the planning of a small power installation, gives the size of shafting and pulleys, suggests the correct location of machines, and indicates the proper size of engine to buy. All subjects are considered from the farmer's viewpoint and are treated in a practical way. Many small streams might be used to turn water wheels for the generation of electricity, which, in turn, might be used for operating many farm machines. This possibility is presented in such a manner that the farmer can decide whether or not such a plan is practical in his case. The use of tractors on Ohio farms, the proper size, the best type, etc., is presented in common sense manner.

FARM LIGHTING SYSTEMS

Course No. 20 **4 Lessons**

Prepared by H. C. Ramsower, Professor of Agricultural Engineering.

Every one knows how gloomy and cheerless a house is without a good light. When the family gathers around the table for its evening work or pleasure the light should be of good quality and ample in quantity for all. The common coal-oil lamp is gradually giving way to the improved coal-oil lamps and to other systems of lighting. The newer lamps and lighting systems are not expensive, especially if quality and quantity of light is considered.

This course first takes up the simpler and cheaper forms of table lamps, such as kerosene, gasoline, and acetylene lamps. The advantages and disadvantages of each and the cost of operating each kind are shown. Secondly, the more modern and complete lighting systems, especially the gasoline, the acetylene, and the electric outfits are described. The chief features of each system are pointed out and an estimate is made of the cost of installation and running it.

FARM BUILDINGS

Course No. 21 **6 Lessons**

Prepared by F. W. Ives, Assistant Professor in Agricultural Engineering.

Usually the prosperity of a farm or of a farming community is reflected in the character of the farm buildings. This course does not consist so much in giving definite plans of various kinds of farm buildings as in discussing the essential factors that should be considered before constructing any kind of farm buildings.

Two of the most essential factors concerning the construction of all buildings are foundations and materials and one lesson is devoted to each of these subjects. The rest of the course will be devoted to the planning and to a discussion of desirable and undesirable features of the farm home, barns, silos, and small farm buildings, such as, granaries, cribs, swine houses, poultry houses, dairy houses, and ice houses. After taking the first and second lessons a student may select the order that he desires to receive the other lessons. Thus, if he desires silos, he may receive the lesson, Silos, third. This course is not intended to make skilled carpenters,, but it will aid the student in deciding and in planning the building that will most nearly meet any particular set of conditions.

FARM ACCOUNTS

Course No. 22 **5 Lessons**

Prepared by T. D. Phillips, Assistant Professor of Rural Economics.

This course deals with the principles of bookkeeping as they are related to the farm business. A study of the fundamental principles of bookkeeping is made by the use of simple farm transactions and this study is followed by the application of accounting methods to the farm business as a whole. In this way a system of accounting is developed that may be adapted to different types of farming.

Any inquiries concerning the correspondence courses should be addressed to J. E. McClintock, Supervisor of Corresponence Courses; College of Agriculture, Columbus, Ohio.

AVAILABLE EXTENSION BULLETINS

A Farm Garden.
Boys' Judging Contests.
Bees.
Beneficial Habits of Snakes, Toads, and Other Related Animals.
Bread.
Butter Making.
Celery Culture.
Clover.
Drainage of Farm Land.
Fresh Vegetables in Winter.
Home Butter Making.
Home Laundering.
Judging Dairy Cattle.
Judging Draft Horses.
Kitchens.
Liming the Soil.
Making Good Earth Roads.
Meat and Meat Substitutes.
Orchard Cover Crops.
Plant Food.
Potatoes.
Practical Agricultural for Rural Schools.
Production of Clean Milk.
Propagation of Plants.
Rain.
School Exhibits.
Sewing.
Small Fruits.
Soil Formation.
Spraying Fruit Trees.
Swine Judging for Beginners.
Ten Common Household Insects.
Textiles and Dress.
The Silo for the Dairy.
Transplanting.
Trees for Shade, Shelter and Ornament.
Weather Forecasts.